Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A method performed by a computer system having a hardware emulation, said method comprising the steps of:

obtaining ~~an~~ a first set of one or more emulated ~~sequence of~~ instructions derived from an original set of one or more ~~sequence of~~ instructions using the hardware emulation;

initiating execution of the first set of one or more emulated ~~sequence of~~ instructions;

producing first dynamic execution information in response to executing the first set of one or more emulated ~~sequence of~~ instructions; and

changing ~~hardware of the computer system~~ the hardware emulation dynamically for producing ~~different dynamic execution information~~ a second set of one or more emulated instructions by modifying at least a parameter of one instruction of the first set of one or more emulated instructions in response to said first dynamic execution information.

2. (cancelled)

3. (currently amended) The method of claim 1, wherein:

said step of changing, includes modifying at least a register field of one instruction of the first set of one or more emulated ~~register fields of instructions of the emulated sequence of~~ instructions.

4. (original) The method of claim 1, wherein:

said step of changing, includes software producing multiple conditions codes that replace a single condition code of the first dynamic execution information.

5. (currently amended) The method of claim 1, wherein:

said steps of executing, producing and changing are conducted recursively on at least some of successive segments of the first set of one or more emulated ~~sequence of~~ instructions.

6. (canceled)

7. (original) The method of claim 1, wherein:

said step of producing, produces branch prediction information; and

said step of changing, changes condition codes of the branch prediction information.

8. (original) The method of claim 1, wherein:

said step of producing, produces a history of register allocation information; and

said step of changing, changes register allocation.

9. (original) The method of claim 1, wherein:

said step of producing, produces a history of branch prediction dynamic execution information; and

said step of changing, generates a branch prediction likelihood code for a group of branches that may be different from any branch prediction of the members of the group.

10. (cancelled)

11-23. (canceled)

24. (currently amended) A computer system for improving performance of ~~an~~ a set of one or more emulated ~~sequence of~~ instructions, the system comprising:

~~storage means for storing~~ a hardware emulation code generator generating a first set of one or more ~~an~~ emulated ~~sequence of~~ instructions produced from an original set of one or more ~~sequence of~~ instructions;

processor means for executing the first set of one or more emulated ~~sequence of~~ instructions;

means for producing dynamic execution information in response to execution of the first set of one or more emulated ~~sequence of~~ instructions; and

means ~~for responding to the dynamic execution information and~~ for changing ~~hardware of the computer system~~ the hardware emulation code generator dynamically to produce a second set of one or more emulated instructions by modifying at least a parameter of one instruction of the first set of one or more emulated instructions in response to said

dynamic execution information. ~~so that at least some dynamic execution information obtained on subsequent execution of the emulated sequence of instructions would be changed.~~

25. (currently amended) The system of claim 24, wherein:

said means for producing, maintains a record of branch addresses in the first set of one or more emulated ~~sequence of~~ instructions historically correlated to whether branches were taken during execution of the first set of one or more emulated ~~sequence of~~ instructions; and

said means for ~~responding and~~ changing, changes a likelihood condition code of the branch prediction information for at least one of the branches.

26. (cancelled)

27. (currently amended) The system of claim 24, wherein:

said means for ~~responding and~~ changing, includes modifying at least a register ~~fields~~ field of ~~instructions~~ one instruction of the first set of one or more emulated ~~sequence of~~ instructions.

28. (currently amended) The system of claim 24, wherein:

said means for ~~responding and~~ changing, includes cycling allocation of registers in a pool of registers as some of successively identified registers in the first set of one or more emulated ~~sequence of~~ instructions.

29. (currently amended) The system of claim 24, wherein:

said means for producing, produces a history of temporary register allocation information; and

said means for ~~responding and~~ changing, changes a register parameter ~~parameters~~ of one instruction of the first set of one or more emulated ~~sequence of~~ instructions.

30. (currently amended) The system of claim 26, ~~further comprising~~ wherein:

~~an~~ said hardware emulation code generator for generating the first set of one or more emulated ~~sequence of~~ instructions that is executable with a first instruction set from the set of one or more original ~~sequence of~~ instructions that is executable with a different instruction set;

said means for producing, generating historical register usage information regarding register status during execution of the first set of one or more emulated ~~sequence of~~ instructions; and

said means for ~~responding and~~ changing, modifying the first set of one or more emulated ~~sequence of~~ instructions in response to at least the historical register usage information.

31. (currently amended) The system of claim 24, ~~further comprising~~ wherein:

~~an~~ said hardware emulation code generator for generating the first set of one or more emulated ~~sequence of~~ instructions that is executable with a first instruction set from the set of one or more original ~~sequence of~~ instructions that is executable with a different instruction set;

said means for producing, generating historical branch prediction dynamic execution information regarding likelihood of branches taken during execution of the first set of one or more emulated ~~sequence of~~ instructions; and

said means for ~~responding and~~ changing, generating a branch prediction likelihood code for a group of branches that may be different from any branch prediction of the members of the group and is dependent upon a combined effect of the branch predictions of the members of the group.

32. (currently amended) A method performed by a computer system, said method comprising the steps of:

obtaining an emulated sequence of instructions derived from an original sequence of instructions;

initiating execution of the emulated sequence of instructions;

producing first dynamic execution information in response to executing the emulated sequence of instructions; and

changing the computer system dynamically ~~for producing~~ to produce different dynamic execution information in response to said first dynamic execution information;

wherein said step of changing, includes software producing multiple conditions codes that replace a single condition code of the first dynamic execution information.

33-35. (canceled)

36. (new) The method of claim 1, wherein:

said step of modifying at least a parameter of one instruction of the first set of one or more emulated instructions, includes modifying a plurality of parameters of some instructions of the first set of one or more emulated instructions.

37. (new) The system of claim 24, wherein:

means for changing, includes means for changing the hardware emulation code generator dynamically to produce a second set of one or more emulated instructions by modifying a plurality of parameters of some instructions of the first set of one or more emulated instructions.